

CLAIMS

1. A belt buckle assembly, comprising:
a housing including a base plate having a pair of longitudinal edges, a pair of lateral edges extending substantially transverse to said longitudinal edges, a groove having an open end and a closed end extending parallel to said longitudinal edges and at least one locking lever pivotally mounted along one of said longitudinal edges; and
a locking member having a base portion, a tongue projecting from said base portion, said tongue having at least one planar surface, a lug protruding from said at least one planar surface and a mating member mounted at an end opposite said locking member base portion, and
wherein in an assembled position said lug engages said groove and said tongue is secured by said pair of locking levers.
2. The assembly of claim 1 wherein the open end of said groove forms an opening in one of said pair of lateral edges.
3. The assembly of claim 2 wherein said base plate includes a raised portion at the other end of said pair of lateral edges, said raised portion including at least one notch into which is mounted at least one spring, said spring exerting a force against each of said at least one locking lever.
4. The assembly of claim 1 wherein said at least one locking lever includes a notch that forms an ear and said locking member includes longitudinal edges extending between said base portion and said end opposite said locking member base portion, at least one of said longitudinal ends of said tongue including a recess, and wherein in said assembled position, said at least one notch engages said recess.
5. The assembly of claim 1 further comprising an optical switch member mounted on said base plate substantially adjacent the closed end of said groove.
6. The assembly of claim 5 wherein said optical switch provides an indication of whether the buckle is latched.

7. The assembly of claim 5 further comprising an optical fiber coupled to said optical switch.

8. The assembly of claim 5, further comprising an electrical wire coupled to said optical switch.

9. The assembly of claim 1 wherein said at least one locking lever includes a handle portion for releasing said tongue, said handle portion protruding from a slot along one of said longitudinal edges.

10. A belt buckle assembly, comprising:

a locking member;

a buckle housing for receiving said locking member;

and

an optical switch disposed within said buckle housing to provide an indication of whether said locking member is secured to said buckle housing.

11. The assembly of claim 10 wherein said buckle housing includes a base plate having a pair of longitudinal edges, a pair of lateral edges extending substantially transverse to said longitudinal edges, a groove having an open end and a closed end centered between said longitudinal edges and extending parallel to said longitudinal edges and a pair of locking levers each pivotally mounted along one of said longitudinal edges.

12. The assembly of claim 11 wherein said base plate includes a raised portion at the other of said pair of lateral edges, said raised portion including a pair of notches into which are mounted a pair of springs, each of said springs exerting a force against each of said locking levers.

13. The assembly of claim 10 wherein said locking member includes a base portion, a tongue projecting from said base portion, said tongue having at least one planar surface, a lug protruding from said at least one planar surface and a mating member mounted at an end opposite said locking member base portion.

14. The assembly of claim 13 wherein each of said locking levers include a notch that forms an ear and said

locking member includes longitudinal edges extending between said base portion and said end opposite said locking member base portion, each of said longitudinal ends of said tongue including recesses, and wherein in said assembled position each of said notches engage one each of said recesses.

15. The assembly of claim 10 wherein said buckle housing includes a base portion having a lug member projecting therefrom, a first sidewall and a second sidewall projecting from said base portion.

16. The assembly of claim 10 wherein said locking member includes a base portion and an elongated portion projecting from said base portion, said elongated portion including a free end opposite said base portion and a planar surface having a recess.

17. A belt buckle, comprising:

a buckle housing including a base, first and second sidewalls projecting from said base so as to form a substantially U-shaped member and a lug member projecting from said base;

an electrical switching member having a pair of contact pins, said switching member being fastened to said base; and

a tongue plate having a base portion and an elongated portion projecting from said base portion, said elongated portion having a free-end opposite said base portion, a lower planar surface having a recess and mating member mounted at the free end thereof, and

wherein in an assembled position said tongue plate is inserted in said housing such that said lug engages said recess and said mating member engages said contact pins.

18. The belt buckle of claim 17 further comprising a handle pivotally mounted onto to said sidewalls, said handle being operative to maintain said tongue plate in a locked position in said housing.

19. A belt buckle, comprising:

a non-magnetic housing having a switch member therein; and

a non-magnetic locking member that is adapted to be received and secured by said housing, and

wherein said switch member is capable of providing an indication that the locking member is secured by said housing.

20. The belt buckle of claim 19 wherein said housing and locking member are made using materials comprising glass-filled nylon.

21. The belt buckle of claim 20 wherein said housing and locking member are made using materials comprising 33% glass nylon.

22. The belt buckle of claim 19 wherein said housing and locking member are made using materials comprising high-strength ABS.

23. The belt buckle of claim 19 wherein said housing and locking member are made using materials comprising G-10 fiberglass resin composite.

24. The belt buckle of claim 19 wherein said housing and locking member are made using materials comprising high-impact PVC.

25. A combination for magnetic resonance imaging, comprising:

a magnetic resonance imaging apparatus having a pair of opposed elements spaced apart along a horizontal pole axis and defining a patient receiving space therebetween;

a patient support positionable in said patient receiving space; and

a belt buckle assembly including a housing, a locking member and a switch member and wherein said switch member provides an indication of whether said belt buckle assembly is latched.

26. The combination of claim 25 wherein said switch member comprises an optical switch.

27. The combination of claim 25 wherein said belt buckle assembly comprises an electrical switch.